

CLAIMS

1. A method for analyzing an interaction between a sugar chain and a protein that interacts with a sugar chain, wherein the method comprises the steps of:
 - 5 (a) contacting a fluorescently labeled subject sugar chain or subject glycoconjugate with a substrate onto which a protein that interacts with a sugar chain has been immobilized; and
 - (b) measuring the intensity of an excited fluorescence after applying an excitation light without washing the substrate.
- 10 2. The method of claim 1, wherein the substrate onto which the protein that interacts with the sugar chain has been immobilized is a substrate coated with a compound comprising an epoxy group as an active group.
- 15 3. The method of claim 2, wherein the compound comprising an epoxy group as an active group is 3-glycidoxypropyl trimethoxysilane (GTMS).
4. A method for analyzing an interaction between a sugar chain and a protein that interacts with a sugar chain, wherein the method comprises the steps of:
 - 20 (a) contacting a protein that interacts with a fluorescently labeled sugar chain with a substrate onto which a subject glycoconjugate has been immobilized; and
 - (b) measuring the intensity of an excited fluorescence after applying an excitation light without washing the substrate.
- 25 5. The method of claim 4, wherein the substrate onto which the subject glycoconjugate has been immobilized is a substrate coated with a compound comprising an epoxy group as an active group.
- 30 6. The method of claim 5, wherein the compound comprising an epoxy group as an active group is 3-glycidoxypropyl trimethoxysilane (GTMS).
7. A method for analyzing an interaction between a sugar chain and a protein that interacts with a sugar chain, wherein the method comprises the steps of:
 - 35 (a) contacting a subject glycoconjugate with a substrate onto which a protein that interacts with a region other than a sugar chain of a glycoconjugate has been immobilized;
 - (b) contacting a fluorescently labeled protein that interacts with a sugar chain with the substrate obtained in step (a); and

(c) measuring the intensity of an excited fluorescence after applying an excitation light without washing the substrate.

- 5 8. The method of claim 7, wherein the substrate onto which the protein that interacts with a region other than a sugar chain of a glycoconjugate has been immobilized is a substrate coated with a compound comprising an epoxy group as an active group.
- 10 9. The method of claim 8, wherein the compound comprising an epoxy group as an active group is 3-glycidoxypropyl trimethoxysilane (GTMS).
- 10 10. The method of any one of claims 7 to 9, wherein the protein that interacts with a region other than a sugar chain of a glycoconjugate is an antibody.
- 15 11. The method of any one of claims 1 to 10, wherein the protein that interacts with a sugar chain is a lectin, an enzymatic protein comprising a sugar-binding domain, a cytokine having an affinity for a sugar chain, or an antibody that interacts with a sugar chain.
- 20 12. The method of any one of claims 1 to 11, wherein the excitation light is an evanescent wave.
- 25 13. The method of any of claims 1 to 12, wherein the glycoconjugate is a glycoprotein, a proteoglycan, or a glycolipid.
- 30 14. A substrate coated with a compound comprising an epoxy group as an active group and onto which a protein that interacts with a sugar chain or a protein that interacts with a region other than a sugar chain of a glycoconjugate has been immobilized.
- 35 15. The substrate of claim 14, wherein the compound comprising an epoxy group as an active group is 3-glycidoxypropyl trimethoxysilane (GTMS).
16. The substrate of claim 14 or 15, wherein the protein that interacts with a region other than a sugar chain of a glycoconjugate is an antibody.
17. The substrate of claim 14 or 15, wherein the protein that interacts with a sugar chain is a lectin, an enzymatic protein comprising a sugar-binding domain, a cytokine having an affinity for a sugar chain, or an antibody that interacts with a sugar chain.

18. The substrate of any one of claims 14 to 17, wherein the glycoconjugate is a glycoprotein, a proteoglycan, or a glycolipid.
- 5 19. A method for producing a substrate, wherein the method comprises the steps of:
 (a) coating the substrate with a compound comprising an epoxy group as an active group;
 and
 (b) immobilizing a protein that interacts with a sugar chain or a protein that interacts with a
10 region other than a sugar chain of a glycoconjugate onto the substrate obtained in step (a).
20. The method of claim 19, wherein the protein that interacts with a region other than a sugar chain of a glycoconjugate is an antibody.
- 15 21. The method of claim 19, wherein the protein that interacts with a sugar chain is a lectin, an enzymatic protein comprising a sugar-binding domain, a cytokine having an affinity for a sugar chain, or an antibody that interacts with a sugar chain.
22. The method of any one of claims 19 to 21, wherein the glycoconjugate is a glycoprotein, a proteoglycan, or a glycolipid.